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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/429,920	10/29/1999	ATSUSHI WATANABE	392.1666/JDH	6526
21171	7590	03/13/2006	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LU, TOM Y	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/429,920

Applicant(s)

WATANABE ET AL.

Examiner

Tom Y. Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 5, 7, 8, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4, 5, 7, 8, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413). |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

1. The amendment and written response filed on 12/22/2005 has been entered and considered.
2. Claims 4, 5, 7, 13 and 14 were amended.
3. Claims 1-3, 6, 9-12 and 15 were cancelled.
4. Claims 4, 5, 7, 8, 13 and 14 are pending.

Response to Arguments

5. Claims 4 and 14 were objected to for improper preambles. Applicant's amendment does not remove the objection. The examiner notes as explained in the previous office action dated 8/25/2005, the claimed invention as recited in claims 4 and 14 is directed to a system rather than an image apparatus because the body of the claims calls for a robot controller with a built-in image processing apparatus and a teaching pendant connected to the robot controller through a cable, and the present preamble only calls for the image processing apparatus. And because the claim language in the present preamble only recites the image processing apparatus, the scope of claim is limited to the image processing apparatus only, and the teaching pendant is not considered to be a part of the invention. Simply replacing the word "apparatus" to "system" in the preamble does not remove the objection.
6. Applicant's arguments filed on 12/22/2005 have been fully considered but they are not persuasive.

The Jyumonji reference:

Applicant argues the Jyumonji reference fails to teach image processing in a portable teaching pendant as recited in claim 8. The examiner notes the limitation recited in Claim 8 is “indication for manipulation for image processing”, which does not explicitly state the image processing is done within the teaching pendant, such image processing can be done by a built-in image processor, column 12, line 44. By moving a cursor to a position in the image as shown in figure 11, the image scene changes on the teaching pendant because of image pixels are processed. Therefore, Claim 8 stands rejected.

Applicant argues again in claims 14 and 4 about an image processing unit incorporated in the teaching pendant. The examiner notes as explained in the beginning of the response, the scope of claims limited to an image processing apparatus built in a robot controller, and the teaching pendant is not considered to be a part of invention. For the sake of examination, the examiner addresses every limitation recited in the body of the claims. However, since an image processing apparatus as claimed is built in a robot controller, it is logical to a person of ordinary skill in the art to conclude such image processing apparatus to provide the most image processing capabilities in light of the fact the teaching pendant is a portable device, and applicant never defines the functionality and capability of the image processing unit incorporated in the portable teaching pendant. At the time the invention was made, a person of ordinary skill in the art would have recognized the advantage as recited in the Jyumonji reference to have a built-in image processor in the robot controller perform image processing because it would eliminate the cost of having two image processing units, and the functions performed by an image processor in a portable teaching pendant will remain.

Claim Objections

7. Claims 4 and 14 are objected to because of the following informalities: the preamble of each claim is deemed to be inappropriate. The examiner notes the body of each claim seems to direct to a system rather than simply an image apparatus, also see explanation in paragraph 5 above. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Jyumonji et al (U.S. Patent No. 5,987,591).

Referring to Claim 8, Jyumonji teaches a method (Jyumonji's system is implemented based on a method) comprising: fetching from a camera image data of an image of a workpiece to be worked on by a robot (column 7, lines 52-55); storing image data from the camera or intermediate image data obtained in a stage of image processing (column 7, line 56); and converting image data from the camera, the image data from the camera stored in the memory, or the intermediate image data into a gray scale or a color scale (column 6, line 34); and displaying the converted image on a teach pendant used for generating or editing a robot program or used for operating said robot, wherein said displaying displays the image data and indication for manipulation for image processing simultaneously, or allows a user to enter a switching mode or

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a superposition mode (The examiner notes the image data captured by the camera 30 as shown in figure 11 is displayed on a teaching control panel, and the image data is converted using camera interface 203, column 6, line 34, and the converted image data is displayed on the teaching control panel so that the operator can see the image on the panel in order to operate the robot. Therefore, one of the alternatives of “used for operating said robot” is clearly satisfied. Additionally, the examiner notes the Jyumonji reference does teach the indication for manipulation for image processing, and an indication for manipulation for image processing is the cursor shown in figure 11, which indicates the robot needs to move in the cursor direction, and in doing so, the scenery of the picture changes, which means there is image manipulation taken place. And the cursor is seen with image data together in figure 11, therefore, the limitation of “simultaneously” is satisfied).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-5, 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jyumonji et al (U.S. Patent No. 5,987,591).

- a. Referring to Claim 4, Jyumonji discloses an image processing apparatus for a robot, which is built in a robot controller (column 12, lines 43-44) comprising: a unit for fetching from a camera image data of an image of a workpiece to be worked on by the robot (column 7, lines 52-55); a memory unit that stores image

data from the camera or intermediate image data obtained in a stage of image processing (column 7, line 56); and a unit for converting image data from the camera, the image data from the camera stored in the memory unit, or intermediate image data to a gray scale or a color scale (camera interface 203, column 6, line 34 is the claimed “a unit for converting image data from the camera”, column 6, line 38, the image is converted into a gray scale), wherein: a portable teaching pendant is connected to said robot controller through a cable (column 12, line 25); and said teaching pendant (teaching control panel TP, column 12, line 28) comprises a unit for generating or editing a robot program (the keys of K1, K2 and K3 are used to input the directional parameter to a robot program, in doing so, the robot program is edited), a unit for operating the robot (Keys K1, K2 and K3 are used to operate the robot), and a display unit (a display DP), and can display on the display unit the converted image; and said display unit displays, indication for generating or editing of the robot a program and indication for manipulation of image processing, together with an image simultaneously (the display unit displays a cursor, an arrow and a position indicator as indications for editing of the robot program and manipulation of image processing), or allows a user to select either a switching mode or a superposition mode. Jyumonji does not teach the teaching control panel comprises a unit used for manipulation for image processing. However, Jyumonji does disclose the teaching control panel is connected to the robot controller, which comprises an image processor 2 as shown in figure 4. The image processor is

presumed to perform the claimed "image manipulation" for the teaching control panel as the teaching control panel operates the robot because the scenery of the picture on the display changes, the picture change means image manipulation processing. At the time the invention was made, a person of ordinary skill in the art would have recognized the advantage as recited in the Jyumonji reference to have a built-in image processor in the robot controller perform image processing because it would eliminate the cost of having two image processing units, and the functions performed by an image processor in a portable teaching pendant will remain..

- b. Referring to Claim 5, Jyumonji discloses a unit for displaying and superposing geometric graphics on the image displayed on the display unit in accordance with the operation procedure of the image processing and specifying an image processing with respect to the image (the arrow and position indicator shown in figure 11 are the claimed geometric graphics, which is superposed on the displayed image during operation procedure of the image processing/scenery change, which specifies the moving direction of the robot).
- c. Referring to Claim 7, Jyumonji discloses a unit for incorporating an instruction to process an image into a program of a robot (Keys, K1, K2 and K3 instructs the arrow direction, and the arrow shown in figure 11 is the claimed "an image", which inputs the directional parameters into the robot program).
- d. Referring to Claim 13, the arguments in paragraph 10 above as to the applicability of Jyumonji are incorporated herein. Jyumonji does not teach the teaching control

panel is a touch panel. The examiner takes official notice that teaching control panel can be modified to operate through a touch panel because the teaching control panel in Jyumonji is operated through key buttons on the right side, and a touch panel merely replaces the key buttons with virtual software buttons displayed on the display screen, functionality of the keys K1, K2 and K3 does not change.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jyumonji in view of Wörn et al (U.S. Patent No. 6,362,813 B1). The arguments in paragraph 9 above as to the applicability of Jyumonji are incorporated herein.

With regard to Claim 14, the only unaddressed limitation is “a display unit can display an image processing manipulation menu”. Jyumonji does not explicitly teach the display DP on the teaching control panel TP can display an image processing manipulation menu. Wörn teaches a programming device as shown in figure 3, which contains a VGA display screen and is capable of displaying the display screen of a computer, which controls a manipulator robot 2 as shown in figure 1. At the time the invention was made, it would be reasonable for a person of ordinary skilled in the art to assume that the computer controls the robot contains an image processing manipulation menu, which in Wörn will be displayed on the programming device. And a person of ordinary skilled in the art would be motivated to incorporated such functionality into Jyumonji’s teaching control panel because Wörn teaches it is desirable to have more extensive display possibilities on a portable control panel, column 1, line 60.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TYL



JINGGEWU
PRIMARY EXAMINER